

Roots and Worms - instructions

The game

Raingardens are designed to slow the flow of water to reduce flooding and damage to the environment. This game is designed to slow the flow of water through the board (raised planter) with pupils acting as the water (pupils P5-7 age group) are split into three teams of drizzle, rain and storm). We would suggest a run though playing with normal dice first. The boards for our purpose are constructed from flooring mats which can be extended or reduced in size depending on the number of participants and complexity we wish to include.

This game can easily be chalked out on school grounds for classes to play themselves. Die templates will be placed on the Cumbernauld Living Landscape website under Resources with examples and instructions. The game is designed for a single class of pupils.

The rules

The pupils are split into three teams. Each team assigned a category of rain (drizzle, rain or storm)

The Board

The board is constructed of squares much like snakes and ladders that take the rain (pupils) up or down depending on which square they have landed in from the throw of the dice.



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Maximum of 2 pupils allowed on each square at any one time, additional pupils will have to make their way to the overflow (flood) square to the side of the board, stress this is not a 'loser' (as previously described by a child) box it is to show how water can pool and cause flooding.

Clay

The rain is stuck and cannot move for 1 turn. This may cause an accumulation of rain (pupils) demonstrating water pooling and the difficulty of moving through the board.

Worms

These little guys create holes in the ground which allows water to move more freely down into the soil. Direction of travel is always downwards

Roots

Water is taken back up to the flower for growth, rain (pupils) move up the board

Geotextile zone (blue mats at bottom of game board)

This is the fabric placed in a raised bed between the soil and the gravel to further slowdown the flow of water.



Partners



Funders



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The dice

For younger children P1-P4 we would suggest playing the game with one die (numbered 1-6) and not assigning categories of rainfall to the pupils. As the children move up through primary P5-7 the rain categories can be brought in to create a challenge. Remember the idea of the game is to slow the flow of the water to prevent flooding, this game also brings in the idea that the soils also need to be well draining, i.e. clay catches water and can cause waterlogging – represented by the pupils being stuck for a turn.

Categories of rain:

Drizzle

Description - Slow moving rain water moves well through soils, this is the type of rain that you feel soaks you right through to your bones.

Dice to use - Numbers 1-6 - allows freedom of movement promotes movement through well-draining soils.

Rain

Description – Medium drops of water you can see splashed of rain drop when it falls on the ground, the rain falls quickly and you may see small streams of water running down roadsides or hills

Dice to use - Numbers 1-4 - begins to restrict how far the ran can travel and shows that the water can begin to build up and overflow.

Storm

Description – Larger drops of water falling very fast and lots of it, usually pushed around by wind and can cause large flooded areas to occur

Dice to use - Numbers 1-2 - restricts movement and when linked with Clay spots on board can cause water build up, overflow and flood.

